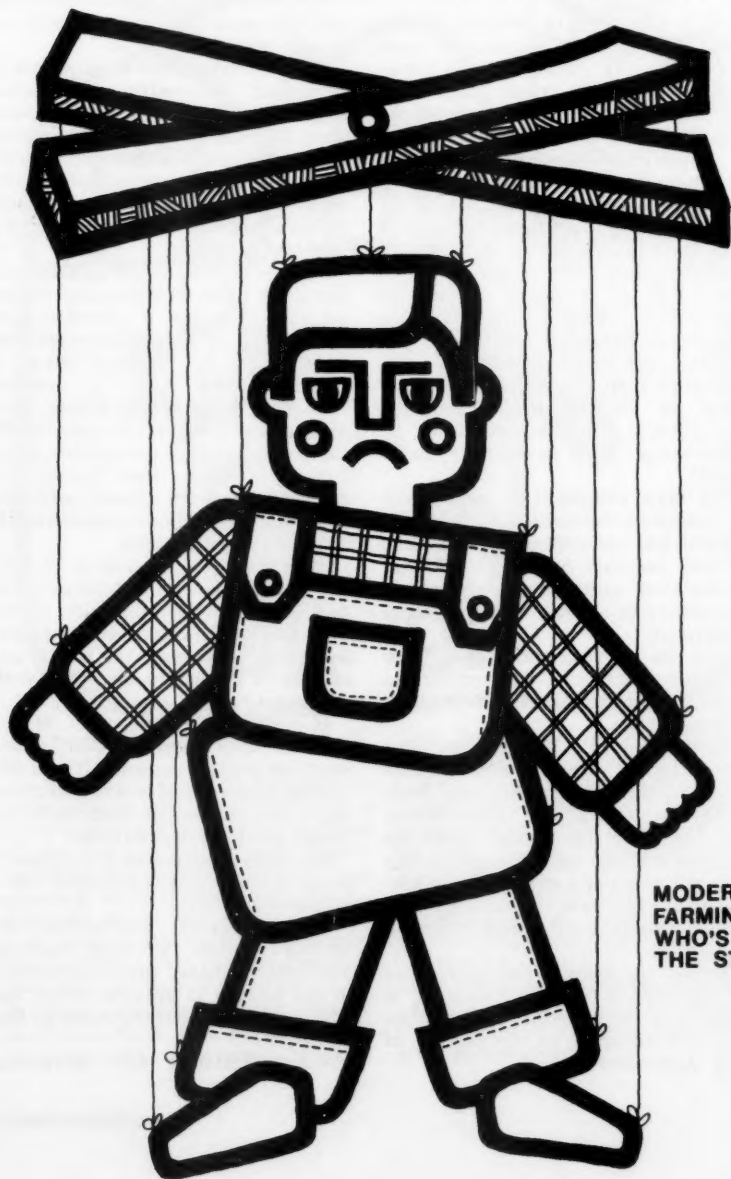


agricultural situation

THE CROP REPORTERS MAGAZINE • OCTOBER 1974
U.S. DEPARTMENT OF AGRICULTURE • STATISTICAL REPORTING SERVICE



MODERN
FARMING:
WHO'S PULLING
THE STRINGS?

MODERN FARMING: WHO'S PULLING THE STRINGS?

U.S. farmers are getting tied up with all kinds of strings to off-farm businesses and organizations—with the result that non-farmers are pulling more and more of the strings in agriculture.

Already substantial elements of entrepreneurial control and decision-making have been shifted from farmers to off-farm firms. And the overall trend is toward an acceleration of such shifts, according to a recent report by Marshall Harris of USDA's Economic Research Service.

The "open sesame" to the off-farm encroachment of control is the rapid pace of change in agricultural technology and in methods of processing and marketing farm goods.

To stay competitive in modern agricultural production, the family farmer has increasingly resorted to greater reliance on credit, leasing, production contracts, cooperative agreements, and government programs.

But in relying on these new arrangements with outsiders, he has often had to trade off a portion of his independence.

To put it simply, he no longer is as free as he once was to independently organize and operate his own farm to his own liking; to manage, direct, coordinate, control, and innovate without outside interference; to buy and sell when and where he chooses; to assume the risks of the farm business, enjoying profits and suffering the losses.

Below are some of the highlights of the USDA report indicating a number of the more important shifts that are occurring in the control of U.S. agriculture.

Power and production contracts.

Vertical coordination via production contracts accounts for more of the shift of entrepreneurial control to off-farm firms than any other modern business practice, with the possible exception of leasing.

Part of this shift stems from credit policies regarding the acquisition of inputs under contracts.

The tendency for contractors to maintain ownership of selected inputs may become a routine provision of contracts as farms become larger and farmers use more credit. Ownership of inputs and products is a key element in the control of agricultural activities that is shifting to off-farm interests.

However, even more important is the shift of entrepreneurial control of on-farm production processes—such as what to produce, how much to produce, when to produce, and how to produce, including what inputs to use. More and more contractors require the farmer to produce to exacting specifications—and the farmer is required to work closely with the contractor's fieldman in meeting the contract requirements.

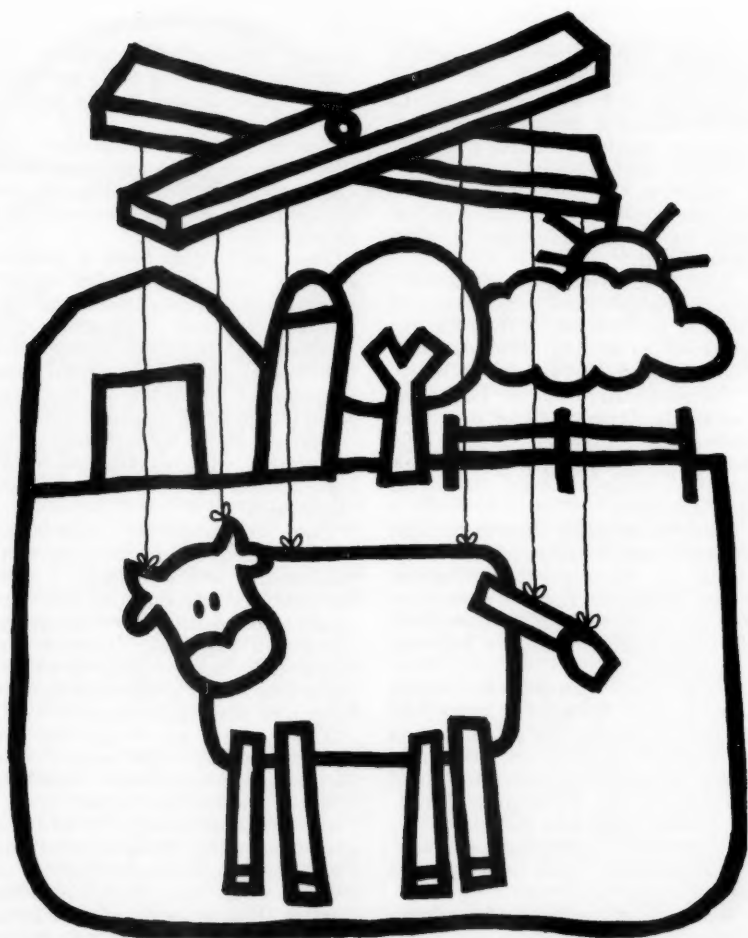
Leasing land. Leasing of farm real estate is so widespread and familiar that the division of the ownership function of entrepreneurship between landlord and tenant is generally accepted without question.

However, USDA's Dr. Harris stresses that some landlords may exercise greater organizational and operational control over farm activities than many off-farm firms do under production contracts.

Leasing diminishes the farmer's control over his operation in a number of ways:

- by sharply restricting his ability to innovate and institute changes on leased property because of the failure to provide compensation for improvements made to that property,

- by limiting his planning



horizon by granting relatively short-term leases,

—and frequently by barring in the lease such practices as farming land other than the landlord's, working off the farm, keeping more than a specified number of livestock, and growing more than specified acreages of various crops.

A study made in Illinois during the late 1960's indicated that renting shifted about half of the control over farming operations from the farmer to the landlord. This approximated the landlord's contribution of about

half the inputs and his claim to about half of the income.

The clout of cooperatives. Cooperatives have three unique characteristics that may be related to the farmer's entrepreneurial situation:

—decentralized control among members, which is often based on the one man, one vote idea,

—limited returns on capital, and—savings distributed as patron refunds and in direct proportion to the amount of business patrons do with cooperatives.

Cooperatives which remain effectively controlled by local members may perform numerous entrepreneurial functions without causing much weakening in the farmer's control over his operation.

However, when cooperatives become regional and national, the shift in entrepreneurship is often substantial.

Also, marketing cooperatives sometimes assume a large portion of control, particularly if they become involved in setting product specifications and delivery schedules.

Corporations' impact. There are two kinds of corporations in agriculture—small, private, closely held family corporations and large, public, widely held investor corporations.

There is typically little or no shift in important decisionmaking functions in family-type corporations—although the incorporation process does essentially transform the self-employed owner into an employee.

However, important—and frequently total—transfer of authority occurs with the formation of investor corporations. This sort of business setup leads to separation of such functions as capital formation, ownership and control of the business, and performance of the organizational and operational management functions.

While both family and investor corporations represented only slightly more than 1 percent of all commercial farms at the time of the Census of Agriculture, 1969, they are expected to become increasingly important over the next decade or so. And the largest growth, in terms of total capital, is likely to be in investor corporations—which implies a major increase in outsiders' control of U.S. agriculture.

Credit consequences. Capital requirements have risen so sharply in U.S. agriculture that a successful one-man farm nowadays requires a minimum investment of about a

quarter million dollars—and Dr. Harris suggests that could be up to a half million dollars by the start of the next decade.

Few farmers can accumulate this kind of money during their productive years, even allowing for the possibility of a substantial inheritance.

The result has been a greater reliance on credit extended by outsiders: farmers' liabilities more than doubled between 1962 and 1972. This heavier debt load has opened the door wide to increased managerial influence by the non-farm lenders.

For example, lenders today are requiring increasingly more information about their borrowers' businesses.

The contemporary borrowing process frequently involves computerized recordkeeping, more detailed information in the loan application, further development of budgeting and flow of income and expenses, more specifications regarding use of loans, and detailed farm and home planning.

The joint participation in decisionmaking is not bad, *per se*. In fact, it sometimes is truly beneficial to those just getting started.

But it's important to be aware of the leverage the lender may have in imposing his recommendations on the borrower. And there's also the danger that supervision will be so close that the borrower may fail to develop his own managerial expertise.

Government action. The intervention of government in the economic activities of farmers is a hallmark of modern agriculture.

Many federal programs affect the farmer's decisionmaking prerogatives, and the impact of these agricultural programs on entrepreneurship may continue to increase as new programs develop to improve the environment and to meet other conditions of a rapidly urbanizing society.



SOY PRODUCTS REPORT

Higher prices and shorter supplies of meat accounted for part of their success—but in any event soy protein mixed with ground beef proved a sales success in supermarkets last year.

Three grocery store chains cooperated with USDA on a special survey to determine how well the soy products actually do with consumers.

For a 30-week period, from April through mid-November 1973, the stores reported on their sales of soy-beef blends, regular hamburger, and lean ground beef.

The blend product was usually priced 15 to 20 cents a pound below regular hamburger. Its absolute price ranged from 69 cents to well over a dollar a pound.

Just how well did the soy-beef blend do?

Within 3 weeks of its introduction, the blend had captured over a fourth of total ground beef sales. That share grew to around 30 percent in August and early September as the supply of the two other meats decreased.

Price was a big selling point in favor of the soy-beef blend. Customers bought most when the blend cost at least 10 cents a pound less than the regular hamburger.

However, when the difference was less than a dime, purchases dropped off, even at the high meat prices prevailing during the April-September period.

The supermarket data indicated the soy-beef blend was probably a more direct substitute for regular hamburger than for lean ground beef. This suggests that the blend was more popular in various prepared dishes than cooked as a patty.

These results are preliminary and further analyses may alter these conclusions somewhat. Also, additional data are still being collected.

OAT PROTEINS

Oats may someday serve along with soybeans as some of the major "functional" proteins in processed food products.

"Functional" proteins—the kind that help hold moisture in baked goods and meat products or carry colors and flavors in canned and processed meats—now add up to a 3-billion-pound market every year.

Any plentiful protein that is free of objectionable flavor can compete in this market and oat proteins—isolated and concentrated—seem a good contender. They taste bland, have good nutritional value with the best amino acid balance of any cereal protein, and they can be produced in commercial quantities by either a wet or dry milling process.

Oat proteins would have a functional value in meats because they are stable in emulsions with water and fats—and could also be used in baked goods because they can hold moisture to help maintain freshness.

The potential of oats as a functional protein is being further heightened by USDA efforts to upgrade the protein of oats. If oats are developed with higher protein levels than are now available, they should yield lower cost protein.

SURVEYSCOPE

To give our readers a clearer picture of the vast scope of SRS activities, Agricultural Situation presents a series of articles on special surveys undertaken in various States. While these are not national surveys, they are important to the agriculture in individual States.

Soaring domestic wine sales in the United States have uncorked a big boom in the Nation's No. 2 grape State, New York.

Last year grape deliveries to wineries and processors were up 25 percent from the year before—a significant figure since virtually all of New York's grape production is processed. And for the first time in history, more of the grape crop was pressed for wine than for sweet juice uses.

"The rapid growth in grape processing—along with the shifting nature of industry demand—has heightened interest in our State

statistics on viticulture," remarks Glenn Suter, Statistician in Charge of the New York Crop Reporting Service in Albany.

"To keep growers and processors abreast of trends in the industry, our office conducts a comprehensive survey of grape deliveries to wineries and processors right after harvest."

"We collect comprehensive data on tonnages supplied to processors by both variety and production area, the average price paid by processors to growers for the major grape varieties, the first use of the grape tonnage (for example, whether it was processed for



To keep grape growers and processors abreast of trends in the industry, New York . . .

wine or sweet juice), and the size of grape imports by processors from other States and Canada."

"These survey data help reduce some of the unknowns in grape production and should enhance the validity of decisions on new plantings and marketing facilities," Suter notes.

Deliveries of New York grapes to wineries and processing plants totaled 125,986 tons in 1973—of which roughly 55 percent went into wine. The year before the wine share came to only 43 percent.

The increasing importance of wine production also showed up in the statistics on wine varieties.

The Concord grape—the deep purple, uniquely sweet variety introduced into New York State from Concord, Mass. where it was developed from a wild grape seed more than a century ago—remained New York's No. 1 grape variety.

Deliveries to processors came to 95,659 tons in 1973, up 19 percent

from the previous year. While juice, jam, and jellies continued to account for the major share of Concord production, wine uses were growing. In 1973 wine uses represented 43 percent of Concord tonnages, compared with 31 percent the year before.

Deliveries of strictly wine variety grapes to processors also recorded sharp gains in 1973. Delaware tonnages rose 152 percent over the small 1972 crop while Catawba was up 59 percent and Niagara tonnage gained 37 percent.

New York's Chautauqua-Erie area, which is the location of most of the State's Concord grape production, accounted for 76,376 tons of the grapes delivered to processors in 1973—an increase of 21 percent from the year before.

Production in the Finger Lakes region, traditionally the wine center of the State, totaled 41,622 tons in 1973, or 43 percent more than the year before.



... conducts a special post-harvest survey of deliveries to wineries and processors.

TOP FARMS

Booming prices and big marketings pushed many a U.S. farm into a higher farm sales bracket in 1973.

At the top, there was a whopping 56 percent hike in the number of farms with farm sales in the \$100,000-plus sales category—plus a 52-percent increase in numbers in the \$40,000-99,999 sales bracket.

Farms in these top two income groups now represent 16 percent of the U.S. total, account for about 70 percent of the cash receipts from farming, and receive 60 percent of the realized net farm income.

This represented dynamic growth when contrasted with the year before—and is spectacular when compared with the start of the 1960's.

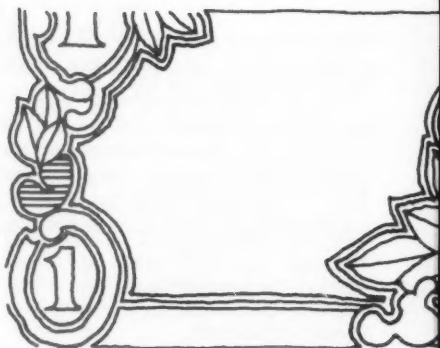
The 1972 picture showed the top two sales classes comprised only 10 percent of all farm numbers and accounted for 61 percent of cash receipts and 45 percent of realized net farm income.

At the start of the 1960's, farms selling upwards of \$40,000 worth of farm products made up less than 3 percent of the farm total, accounted for 33 percent of the cash receipts, and received under 18 percent of realized net farm income.

Of course, the surge in the importance of super-sales farms in 1973 rested heavily on the volatile nature of farm prices.

On a 1967 base, the index of 1973 prices received stood at 172, up 46 percentage points from the year before and 76 percentage points over 1960.

The higher farm prices also explain some of the falloff in the number of farms at the low end of the sales scale. Farms with sales under \$2,500 declined by 26 percent in 1973 as higher earnings pushed some of them into the next highest income bracket. Numbers in the \$2,500-4,999 sales category experienced a 10-percent gain.



FARM INCOME

USDA publishes regularly a comprehensive set of income statistics relating to agriculture which have been developed over more than a third of a century. Basically the income estimates center around two major concepts of farm income.

One views agriculture as a business or industry, measuring gross farm income, farm production expenses, and finally the net return to farm operators for their farm work (including that of their families) and for the capital invested in their farms and equipment. The most commonly used measure of the net return from agriculture is the realized net income of farm operators from farming.

The other major concept relates to the people who live on farms and the incomes they have available for purchasing goods and services. This concept includes the income to people living on farms, such as farm laborers and their families, who are not in farm operator households. It also includes income that farm people receive from nonfarm sources. The estimate appropriate to this concept is the personal income of the farm population from all sources.

The tables illustrate the principle concepts involved in both of these farm income estimates and show how they are measured.





Income from Farming — 1973 Preliminary

Billion dollars

Cash receipts from farm marketings — gross receipts from commercial market sales plus net loans made or guaranteed by CCC.	88.6
Government payments to farmers — payments made directly to farmers in connection with farm programs such as the Feed Grain, Wheat, and Cotton Programs.	+2.6
Realized nonmoney income — value of farm products consumed directly in farm households and value of housing provided by farm dwellings.	+5.8
Realized gross farm income	97.0
Farm production expenses — includes current farm operating expenses for such items as wages paid to farm labor, and outlays for repairs of equipment and operation of the farm, as well as purchases of feed, seed, and livestock. Overhead costs include charges for depreciation and other capital consumption, taxes on farm property, and interest on the farm mortgage debt.	-64.7
Farm operators' realized net income.	32.2
Net change in farm inventories — a dollar measure of the change in physical quantities of livestock and crops on farms, valued at average prices during the year.	+4.0
Farm operators' total net income.	36.2

Personal Income of Farm Population — 1973 Preliminary

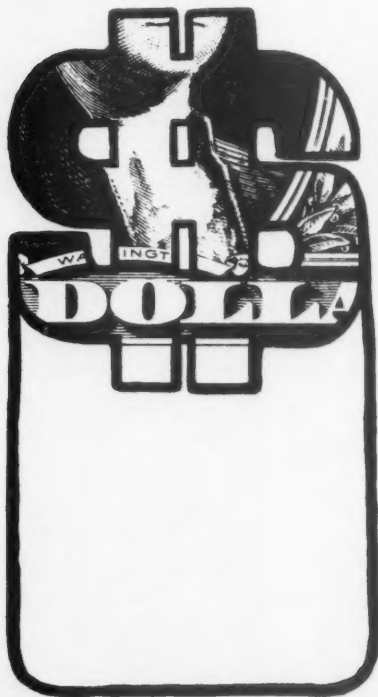
Billion dollars

Personal income from farm sources — the total net income of farm operators, including government payments, plus wages and salaries and other labor income of farm resident workers, minus the net income of nonresident farm operators and the contributions of farm resident operators and workers to social insurance.	.31.4
Income from nonfarm sources — receipts from nonfarm wages and salaries, business and professional income, interest, and transfer payments such as unemployment compensation, social security, and veterans benefits. Also includes rental income from nonfarm sources and an estimate of income from items such as dividends and royalties.	+19.0
Total, all sources	50.4

THE PRICE PERSPECTIVE

During the past two decades, farm prices have risen 72 percent as industrial prices gained 50 percent and service charges more than doubled. The striking feature about the farm price rise is that about three-fourths of it occurred in the past 2 years. Between 1953 and 1967 farm prices were depressed—and in fact, farmers did not receive any higher prices for their products in 1967 than 14 years earlier. The next 4 years saw a gradual 12-percent price gain and then from 1972 to 1973 a whopping 54-percent increase, which dramatically changed the relationship of farm to nonfarm income: a 53-percent share in 1960, farmers' per capita disposable income in 1973 was 113 percent of nonfarmers'.

Farm prices are one of the few items in the economy that still obey the law of gravity—when they go up, they usually come back down. The prices of most everything else tend to stay up. For example, in the past two decades, farm prices rose in 11 years and went down or stayed the same in nine. In contrast, industrial prices increased in 16 of the 20 years while the cost of services went up *every* year. Through most of the past two decades farm prices lagged behind those for nonfarm commodities. However, they finally caught up with the rest of the economy in 1973.



Ups and downs in farm prices are frequently dramatic. Hog prices at Omaha, for example, climbed from \$30.12 per hundredweight on January 2, 1973 to \$61.88 on August 13—a jump of \$31.76. Then the price dropped \$35.63 to \$26.25 per hundredweight on May 21, 1974. Changes in produce prices can be even more pronounced. For instance, the farm price of iceberg lettuce plummeted from \$5.50 a carton on April 30, 1974 to \$2.00 a carton on May 9—a 64-percent drop in just 9 days. Overall, the price of farm products dropped 17.5 percent from January to June 1974. Few items show the volatile price movements of farm products.

Over the long run, declines in farm prices may offset much of the gains—and may even cancel them out altogether. For example, average farm prices for broilers dropped one-half from 1952 to 1972, falling from 29 cents a pound to 14 cents. Then in 1973 the farm price began a recovery—with prices averaging 24 cents. The recovery was short-lived, however. By May 1974 the farm price of broilers had fallen back to an average of 21 cents, and that was a full 28 percent below the level recorded in 1952.



While farm prices still move in two directions, farmers' costs have gone only one way—up. Total production expenses have tripled in the last 20 years as farmers pay a wage bill nearly $2\frac{1}{2}$ times greater than in 1953, farm machinery price levels have more than doubled, farm real estate taxes are 3.7 times higher per acre, and the level of all prices that farmers pay has gone up 79 percent from 20 years ago. Farmers are less able to pass along increased costs than other major economic groups since they deal largely in perishable products that can't be priced and held for that price—they must be sold when ready.

Farm investment in land, buildings, livestock, and equipment has doubled in the last 20 years, rising from \$164.3 billion in 1953 to \$384.5 billion in 1973—an increase of \$220.2 billion. Because farm investment needs have increased more than 10 times faster than net farm income, farmers' debt load has soared. The amount of debt owed by farmers at the start of 1973 was \$73.6 billion, $4\frac{1}{2}$ times more than 20 years earlier.

(This article was drawn from a new USDA publication, *The Real Facts About Food*, which explains some of the economics of food prices and supplies. Single copies are available free from the Special Reports Division, Room 407-A, Office of Communication, USDA, Washington, D.C. 20250.)



Briefings

RECENT REPORTS BY USDA OF ECONOMIC, MARKETING, AND RESEARCH DEVELOPMENTS AFFECTING FARMERS.

DEMAND FOR WHEAT . . . After 2 phenomenal years, the demand for wheat may ease somewhat during 1974/75 as exports slip a tenth from last year's 1,148 million bushels. The lower outshipments will stem from smaller sales to the USSR and People's Republic of China and stiffer competition from other exporting countries. Domestic use will pick up as tight feed grain supplies pull more wheat into feed rations. But the increase won't be large enough to offset the smaller exports. If projections hold, approximately 110 million bushels of 1974 wheat could move into stocks, pushing ending carryover up to 357 million bushels.

SPEAKING OF CARRYOVER . . . Old crop wheat stocks on July 1, 1974 totaled 249 million bushels, the lowest since the summer of 1948. The U.S. Government was virtually out of the wheat business as Commodity Credit Corporation (CCC) stocks were down to nearly nothing and farmer holdings under the price support program were also negligible.

SELLING THE 1974 CROP . . . The close balance between supply and demand for wheat provides unusual marketing opportunities for producers this year. Considering the low level of CCC and commercially held stocks, U.S. farmers now control a sizable portion of this country's marketable free wheat supply—and they're playing it cautious. Reports indicate farmers are holding an unusually large share of the 1974 wheat crop off the market, either in hopes of higher prices, or deferring income, or for some other goal.

PLENTY OF STORAGE SPACE . . . Large amounts of empty storage space in the major producing areas—both on the farm and in commercial elevators—were apparently available to receive the 1974 wheat harvest. A recent study in Kansas indicated that as of May 1, ample storage space existed in Kansas for about 355 million bushels of grain on farms, 280 million in local country elevators, and 237 million in terminal elevators. The vacant storage space, together with an easing of the railroad car shortage, is giving growers additional market flexibility.

TRANSPORTATION CRUNCH EASES . . . According to the Association of American Railroads (AAR), the rail car supply during the summer was in the best condition since the summer of 1972. Shortages—a key indicator of the car supply situation—were down to 2,400 cars as of the third week of June 1974, compared with nearly 26,000 at the same time in 1973, according to the Interstate Commerce Commission. At the same time the backlog of orders for plain, 40-foot, narrow-door box-cars—the type traditionally used for hauling grain—reportedly fell 94% between mid-February 1974 and the last of June while that for covered hoppers was off 81%.

BUT RATES CONTINUE TO CLIMB . . . While moving agricultural products may be getting easier, it's also getting more expensive as the railroads up rates in order to meet higher operating costs. The latest hike approved by the Interstate Commerce Commission amounted to 10% and went into effect on June 20, 1974. It brought to 26% the increase in rail costs during the first half of 1974.

AMPLE LAND 2000 A.D. . . . We are in no immediate danger of running out of farmland, say USDA economists, even though thousands of acres are shifted to other uses each year. Assuming continued gains in production per acre of land farmed and a modest increase in the total U.S. population, the economists project we'll need to harvest 292 million crop acres in 1980 and 272 million in 2000. However, these projections don't take into account the sharp rise in exports we've experienced in the past 2 years. If our exports stay high, our harvested acreage needs will rise to about 304 million in 1980 and 309 million in 2000. But even at the highest level, we've more than enough land to ensure all our domestic food and fiber needs and meat other nonagricultural uses, too, at least into the next century.

CENSUS COUNTDOWN . . . The 1974 Census of Agriculture is only a few months away. Early in January 1975 farmers will receive their report forms which they are requested to complete and return promptly. Census officials note that if farmers have accurate and detailed records this task will be easier for them to do. Questions will be much like those in the previous agricultural census which covered farming and ranching during 1969. By Federal law every report is confidential and may be seen only by sworn Census employees and may be used only for statistical purposes. The mail method reinforces confidentiality. It allows the farmer to complete the report at his convenience with accurate information from his records.

Statistical Barometer

Item	1972	1973	1974—latest available data
Farm Income:			
Volume of farm marketings (1967=100)	113	116	— 2
Cash receipts from farm marketings (\$bil.)	61.0	88.6	91.3 2
Realized gross farm income (\$bil.)	69.9	97.0	98.4 2
Production expenses (\$bil.)	52.4	64.7	74.5 2
Realized net farm income (\$bil.)	17.5	32.2	23.9 2
Income and Spending:			
Disposable personal income, total (\$bil.)	797.0	882.6	— 2
Expenditures for food (\$bil.)	125.0	139.0	— 2
Share of income spent for food (percent)	15.7	15.8	— 2
Farm Food Market Basket:¹			
Retail cost (1967=100)	121	142	160 June
Farm value (1967=100)	124	164	162 June
Farmer's share of retail cost (percent)	40	45	39 June
Prices:			
Consumer price index, all items (1967=100)	125	131	147 June
Food (1967=100)	141	153	160 June
Agricultural Trade:			
Agricultural exports (\$bil.)	9.4	17.7	11.3 Jan.-June
Agricultural imports (\$bil.)	6.5	8.4	5.2 Jan.-June
Farm Production and Efficiency:			
Farm, output, total (1967=100)	112	116	113 August
Crops (1967=100)	113	119	113 August
Livestock (1967=100)	108	107	111 August
Cropland used for crops (1967=100)	98	104	106 August
Crop production per acre (1967=100)	115	115	107 August
Cattle Inventory, July 1:			
Cattle and calves (million head)	—	130.9	138.3 July
Cows and heifers that have calved (mil. head)	51.7	53.8	56.5 July
Beef cows (mil. head)	40.0	42.4	45.3 July
Milk cows (mil. head)	11.7	11.4	11.2 July
Heifers 500 pounds and over (mil. head)	—	18.3	19.0 July
For beef cow replacements (mil. head)	—	7.2	7.8 July
For milk cow replacements (mil. head)	—	3.9	3.9 July
Other heifers	—	7.2	7.3 July
Steers 500 pounds and over	—	17.7	18.3 July
Bulls 500 pounds and over	—	2.6	2.9 July
Heifers, steers, and bulls under 500 pounds (mil. head)	—	38.4	41.7 July
Calves born ²	47.7	49.0	51.0 July

¹Average annual quantities per family and single person households bought by wage and clerical workers, 1960-61, based on Bureau of Labor Statistics figures.

²Annual rate, seasonally adjusted, second quarter.

³Calves born before July 1 plus the number expected to be born after July 1.

AGRICULTURAL SITUATION

OCTOBER 1974 • VOL. 58 NO. 9
GERALDINE SCHUMACHER, EDITOR

The Agricultural Situation, published 11 times a year by USDA's Statistical Reporting Service, is distributed free to crop and livestock reporters in connection with their work. Contents of the magazine may be reprinted without permission. The Secretary of Agriculture has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this Department. Use of funds for printing this publication were approved by the Office of Management and Budget, January 15, 1974. Subscription price \$2.40 a year (\$3.00 foreign). Single copies 25 cents. Order from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

U.S. DEPARTMENT OF AGRICULTURE
STATISTICAL REPORTING SERVICE
WASHINGTON, D. C. 20250

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

To stop mailing ☐ or to change your
address ☐ send mailing label on this
magazine and new address to the
SRS office in charge of your State.

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE
AGR 101



ASH UNIVM300UD R 1
UNIV MICROFILMS
JOY REED SUPR PERIODICALS
300 N ZEEB RD
ANN ARBOR MI 48106

